

ABSTRACT

Methods and apparatus for obtaining a digital code representative of a skin-covered body part (fingertip or other). An image of the body part is acquired, where the image includes a plurality of pixels, each pixel having an associated shade value. A plurality of subsets of pixels from the plurality of pixels is identified, with each subset including at least two pixels having a common one of a plurality of designated shade values. For each of a plurality of combinations of pixels taken from the pixels in the subsets of pixels, a geometric measure of the pixels in that combination is determined and then the geometric measures are encoded into a digital code for the skin-covered body part. In this way, a unique code is obtained that does not contain information about the structure of the body part, thereby alleviating privacy concerns in applications such as access control and offender supervision.